THE VETERINARY RECORD

A Weekly Journal for the Profession.

EDITED BY WILLIAM HUNTING, F.R.C.V.S.

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VIS UNITA FORTIOR.

The value to the medical practitioner of that great organization The British Medical Association cannot be estimated. The Annual Meeting brings together practitioners, not only from the Counties of this Kingdom but from the Countries of the World. It produces a series of papers showing an extent of research and knowledge unequalled by any other assembly in the world, and these give rise to a discussion only inferior in form to the best debates of lawyers, parsons and legislators—classes whose greatest requirement is to *talk* well. The Association publishes a journal, supplies funds for scientific research, has a first-class library, and standing committees which have always the interests of the profession in view, and a strong organization to support them in any action which may be necessary.

The veterinary profession may never hope to equal by any association of its members the power and size of this mighty medical union, but we may in a smaller way unite our forces and put into practice the principle expressed by our College motto. We have now a number of local societies which fairly well cover the ground, and afford in each district opportunities for practitioners to exchange views, and listen to the opinions of fellow practitioners who have devoted special attention to any subject, or who fancy that they have some new facts to demonstrate. Through these Societies much good is done, but as they are all separate and distinct organizations it is impossible to get them to act with the precision and rapidity which are sometimes so necessary in our joint interests.

One great advantage possessed by existing local societies is their independence and freedom from the danger of being 'run' by designing men or selfish cliques. The very last suggestion we should countenance would be one that would in any way destroy the independence or distinct local spirit of our present Societies. Is it not possible to frame a scheme which should combine together the weight of all these societies for united action, and yet not interfere with their independence?

We have a National Veterinary Association, but although its list of members is larger than that of any of the local societies; and although its annual meeting is held at different great centres every year, it wants some more frequent and direct point of contact with the practitioner than can be effected by its one annual meeting. We suggest that in the National Veterinary Association might be found the nucleus of a really national body, and that all now required to make it so is a connection with each local society, and a large increase in its numbers.

The value of unity cannot be over estimated, and our social arrangements more and more tend to enforce the necessity of union amongst all callings. No body of men having common interests can, in these days, rely only upon individual action—taken in detail we are easily imposed upon and beaten. Our profession now has a department in connection with the War Office, and a department in connection with the Board of Agriculture. Local Governments are incomplete without veterinary assistance, and to hold our own all round we must be united and cease to work solely on the old lines of individualism. We have to influence public opinion, we have to advance our corporate interests, we have to show a reason for our existence, and all this is more easily done by association than by individual effort.

IN ADVERSITY.

We published last week a report of the meeting of the Benevolent and Defence Association. It seems strange that practitioners should not support this institution more largely. The work it has done is most remarkable, and the gentlemen to whose energy and generosity success is attributable deserve all the encouragement it is possible to give. Messrs. Greaves, Taylor, and Morgan have simply been public benefactors, and it is poor appreciation not to join the Society they have brought to such a pitch of excellence. We fancy many men forget the existence of the Benevolent and Defence Association. Our profession must of necessity contain many men whose income ceases with their activity, and whose decease means the most serious loss and affliction to relations. Scores of these might save themselves anxious moments, and prevent sad hardships to those they may any day leave behind them by simply subscribing to these Associations.

Every practitioner, no matter how careful or how skilful he may be, runs a daily risk of attack by litigious or dissatisfied clients. When the attack does come he requires assistance, and this he can ensure by becoming a member of the Mutual Defence Association. "We never miss the water till the well runs dry" is but too true, and argument is wasted in enforcing its truth. Surely some of the neglect of these Associations is traceable to the want of publicity given to them. The benefits offered are so apparent that it seems impossible to believe that they are not sought for till adversity comes simply from that human infirmity procrastination. We prefer to believe that they are neglected because unknown.

CASES AND ARTICLES

THE FACIAL SINUSES.

I should be obliged if you could spare me just a little space in your next issue to answer very briefly the notes sent by Prof. Smith to the meeting of the Royal Counties V.M.A. on the 25th ult. I feel now more than ever sorry that he could not be present, because I could have given him convincing proof of the correctness of my argument on every point he has raised.

In sending this reply for publication, I beg to reiterate that these notes of mine have been recorded with no other motive than to demonstrate where we have been in error. I have no desire for notoriety, in fact I should much prefer to jog along in my own quiet way, far removed from the strife and turmoil of those whose inclinations take a different course, but there are certain times when it becomes the duty of an unit of a community or corporate body, to sink his own individual likes and dislikes for the good of the body of which he is a member. I believe that if I knew Prof. Smith better I should have a high personal regard for him, and I am sure that no one appreciates more than I do the very great amount of work he has done, but in this particular instance he is not happy in his criticisms.

I will reply to his remarks *seriatim*.

1st.—He says, by my own admission my knowledge of the anatomy and physiology of the sinuses only dates from last winter. I have only devoted particular attention to these parts during that time, but in the prosecution of the study I have examined some dozens of heads; and one can learn much in a year. On page 2 of my pamphlet Prof. Smith will see that I have been for many years making a "hobby" of a study of the teeth, and this has necessarily shown me a little of the sinuses.

2nd.—Ingesta in sinuses.—One fact is worth dozens of surmises, and in the case that first induced me to pen my paper, *I did find ingesta in the sinuses*. I remember once hearing an anecdote of a prisoner accused of stealing goods; six witnesses had given evidence that they saw him take them, he was asked if he had anything to say in defence, to which he replied that he could easily find sixty witnesses who did not see him take them! This is my position in this argument; *I have seen it*, and this ought to carry more weight than any number of cases where it has *not* been seen, because not looked for. I feel sure that when others have looked as closely as I have done, that ingesta will sometimes be detected.

3rd.—If Iodoform or any other agent were injected, in the way I advise, into the *middle meatus*, it would pass directly into the sinuses, *not otherwise*.

4th.—Prof. Smith flounders here hopelessly. Of course I knew that the sinuses communicated with the nasal chambers, but I had never seen, and by a remark of Prof. Smith's in his original paper he could not then have known the position and course of the canal from the anterior sinus. Professor Smith says in his original paper "you may have a very considerable amount of tympany over your lower sinus, and yet it may be very much affected, simply because the fluid is discharged as fast as collected." When I tell Prof. Smith that this opening is on the extreme *upper* margin of the sinus, how can he reconcile his knowledge with a theory that this drains against gravity? (See plate 11 in my pamphlet). He says further that he has known for years, or that the Book of Nature revealed to him years ago, that these two cavities, the anterior and posterior sinuses, did *not* communicate with each other, whereas it was one of the points of my paper to prove that this idea was erroneous, and *that these cavities did communicate by the common opening*. See page 4 of pamphlet.

5th.—Prof. Smith's argument about the time taken to expose the opening, either meant that it (the opening) was so small that it took 25 minutes to expose it, or it meant nothing. I purposely refrained from touching this point in my reply, because Prof. Smith made such a lame plea at Maidenhead that I felt sorry for him.

6th.—In no part of my paper do I find fault with the sound surgical rule of making a depending orifice to drain pus, but what I do say on page 6 is "the part of the sinus situated in the turbinated bone proper is lower than the opening we have been accustomed to make through the outer walls of the cavities, and therefore our opening could not drain them satisfactorily."

7th.—I am perfectly sure that if Professor Smith would study for himself the nasal chambers of the foxhound or any other animal in which the sense of olfaction is highly developed, he would be convinced that the turbinated bones played a very important part in the function, and as I contend that these sinuses in the horse are but modifications of the more complex convolutions of the turbinators in these other animals, so am I convinced that they are essential to the sense of smell, not by vibrations of the turbinated bones, but by rarefying and moistening the air before it strikes the olfactory nerve distributed mostly in the ethmoidal cells, *which in every part of them have air on each side a delicate membrane in which the nerve is distributed*. Pages might be written on this subject, of which the above is but a broad rough outline.

8th.—I only suggest that hay seeds might find their way into the sinuses by the horse being fed out of a rack above his head, because in this position the erectile tissue would probably be nearly bloodless, and therefore lax and small. It has been my lot on many occasions to see horses in the condition named by Professor Smith with the nasal membranes covered thickly by dust, but in these cases I would remind Professor Smith that the opening to the sinuses would be protected by the anterior cornu by the maxillary turbinated bone being drawn across the middle meatus into the false nostril.

9th.—When I heard Prof. Smith give his lecture I was distinctly under the impression that he advocated the extraction of a molar tooth for the purpose

of establishing a drainage into the mouth, and I understood him to say that either the 4th, 5th, or 6th might be extracted. I am very sorry if I was wrong, but, at any rate, I think I have satisfactorily demonstrated the absurdity of such a line of treatment.

Lastly.—If we have found a "specific" in "hydrastis," both our papers have borne good fruit in eliciting the fact, and the profession owe a debt of gratitude to those gentlemen who have given us their experience of its action in practice. Only let us beware that our confidence is not misplaced, because though an agent may have a "specific" action on certain tissues and organs, it would not have a "specific" action in effecting a cure when those tissues or organs were diseased, unless we first ascertained the cause. If a foreign body were lodged in the sinus all the hydrastis in the world would not effect a cure until the irritant was removed, and when this was removed the case would not need the hydrastis.

THOS. B. GOODALL.

Christchurch, Hants.
13th December, 1892.

A VETERINARY PHARMACOPŒIA.

By J. DONALD, F.R.C.V.S.

In *The Record* of November 12th there is an article against the proposed Pharmacopœia to which I desire to make a brief reply. I admit it is difficult to follow the writer of that article, because as one critic has observed "What he builds up with one hand he knocks down with the other," but what I propose to do is to examine his objections in the light of his own knowledge.

In the first place it is contended that the preparations of the B.P. cannot be improved upon from a veterinary point of view, and consequently the B.P. is equally as well adapted to meet the requirements of veterinary surgeons as it is those of the medical practitioners, except that the substitution of methylated spirit for rectified is advocated in the preparation of the tinctures.

From a purely economic point of view the use of duty-free spirit would in many cases be most desirable, but surely Mr. McLaren must know that the use of methylated spirit internally, for either man or beast is illegal, and that there is not the remotest probabitity of its use ever being conceded to veterinary surgeons. The hardship of being compelled to use such an expensive solvent as S. V. R. in such quantity as directed in most of the B.P. preparations, without any corresponding therapeutic advantages—indeed often great disadvantage—is in most cases prohibitive, and a serious bar to the progress of our therapeutic knowledge; consequently I see strong economic reasons why a suitable pharmacopœia should be provided for the profession. By way of illustration, suppose Mr. McLaren desires to give tr. belladonna B.P., in a quantity corresponding in therapeutic strength to ʒiss of the green extract, nearly 12 fluid ounces would have to be given. Leaving out of consideration the modifying effect of so large a quantity of alcohol on the dose of belladonna, is it to the interest or benefit of anyone concerned that nearly 2/- worth of solvent should be given with each dose. In the case of aloes; what pharmacopœial fluid preparation would he recommend? The tincture only contains ½ oz. of socotrine aloes in each pint of proof spirit, and the decoction is just as bad. For another example, take cannabis indica, the only fluid preparation of which is the tr., and for ½ an ounce—no uncommon dose—10 ounces of rectified spirit would have to be given. I might multiply these examples to a very considerable number, but I desire to confine myself, as nearly as possible, to those drugs referred to by Mr. McLaren.

Mr. McLaren's next point is to defend the teaching of pharmacy at the College in his student days, and to boastfully assert the thoroughness of his knowledge of the art and practice of pharmacy. I believe his Alma Mater teaches her students to prepare their tincture of opium with 1 drachm of opium to the ounce of proof spirit, or in other words 1 in 8; the lecturer remarking to his class that this is a more convenient strength and saves half the spirit. That a tincture of this strength is very much more convenient cannot be denied, but it does not necessarily follow that decreasing the solvent by one half produces a tincture of double the strength; and unless some different method than that directed by the British Pharmacopœia be followed, I submit that an ounce of the finished product does not represent the soluble active part of 60 grains of opium, and that a portion of unexhausted opium is thrown away in the mare, and the prescriber deceived as to the strength of the preparation he is prescribing. I refrain from further comment until the working formula for this tincture is produced, for we are told they were taught the best methods of manufacturing their preparations; but I cannot accept any method as either the best, or even good, unless it exhausts the component basis of its active principles.

Perhaps Mr. McLaren will state at what point full saturation of the menstruum takes place. That a liquid preparation of opium can be produced of this or greater strength by a less expensive and more effectual solvent than spirit is well-known, but this I need not trouble your readers with now, beyond observing the necessity of keeping the alcoholic proportions of opium preparations at the lowest possible point when this agent is to be employed in its more strictly anodyne and sedative applications. Was it not taught in the College in his day to make iron sulphate into balls with soap as an excipient, and which of the alœtic masses in the works he quotes can be recommend as an ideal formula suitable for both summer and winter use? and where does he find a convenient formula for watery or alcoholic solution of Barbadoes aloes?

Mr. McLaren seems to have a very vague notion of the function and use of a pharmacopœia. It is not a work to make Messrs. Hunting and Smith think and act as do Messrs. Williams, Mahon and Hoare. The action of remedies belongs to the

domain of pure pharmacology and therapeutics, and not pharmacy. A pharmacopœia is a book for the indentification of simple and the preparation of compound medicinal agents, or as professor Redwood puts it, "to serve the twofold purpose of a register of approved remedies, and a key or index by which the dispenser can interpret the remedies ordered." It is just possible if authors and observers were working with the same preparations of a definite composition and strength some of the apparent discrepancies might disappear, while others might be considerably modified.

Next we have the startling assertion that Mr. McLaren can, in a few hours of an evening, compound sufficient medicine for his own requirements and also for the whole of the practitioners of his county. Well if this statement be true I blush for the Yorkshire veterinary surgeons, and I sigh for the dispensing and the fate of their patients.

We are asked who is to settle the question of doses, and a number of illustrations are quoted to show the present want of uniformity. It is inferred that because no uniformity exists none should be attempted. The very unsatisfactory condition of our posology is a most cogent reason why some system of uniformity should be attempted. True it is that doses are only relative or approximate quantities within which the prescriber may safely act in ordinary cases; but surely it would be possible to draw up a table of doses possessing greater uniformity, and nearer the approximate quantities that may safely be used under ordinary circumstances, than what are contained in the current text books.

This subject of dosage is one of great interest and import, and sufficient attention is not paid to it by the generality of practitioners. There is much to learn concerning the matter, and the subject opens up a vast field for original investigation. The best knowledge which at present exists about dosage is undoubtedly confined to a very small section of the profession.

A very few words on his quoted examples. Any practitioner who dabbles with one ounce doses of tr. opii. as an anodyne or sedative is one of those pitiful beings who has not attained that maturity of mind and boldness of action necessary to allow the exigencies of the case before him to be his guide, and should have chosen some other vocation than the practice of veterinary medicine.

The text books give the dose of ext. belladonna as ʒi to ʒij and the tincture ʒi to ʒij. Now one ounce of belladonna tincture is equal in therapeutical strength to eight grains of the extract. This is by no means a solitary instance of the inconsistency of our posology, and a study of our best authors reveal some startling variations. Carbolic acid is one of those agents whose activity greatly depends upon the vehicle in which it is administered, and the maximum dose quoted is not extraordinary. I might remind our critic that the dose of an agent is not simply the quantity put into the stomach at one time, but the amount of the drug existing in the circulation at any given time. Flemming's tincture of aconite is one of those preparations which varies according to the source from which it is obtained, nor is this to be wondered at when the text books quote its relative strength at from nearly 4 to 4½ and 5 times as strong as the B.P., and the original formula of the late Dr. Flemming contains six times as much root as the B.P. preparation. Therefore the commercial samples may be said to vary from 3½ to 6 times as strong as the B.P. and this variation combined with the care necessary in its preparation and the *relative size of drops* may largely account for the difference in effect of such a potent and valuable remedy.

The final reason which Mr. McLaren advances why the Council should not take upon itself the responsibility of bringing out an official pharmacopœia is "the present conflicting state of veterinary pharmacy and materia medica." I admit the truth of the unsatisfactory state of our materia medica and pharmacy, but I claim that as one of the very strongest reasons that he could have advanced why a pharmacopœia is necessary.

NOTES ON THE BERLIN VETERINARY SCHOOL.

By Jno. A. W. Dollar.

THE SCHOOL FROM ITS FOUNDATION TO THE PRESENT TIME.

"Seeing that the want of good horse and cattle doctors was attended by such disastrous consequences both to the army and the country at large," Frederick William II. in 1787 commissioned Count Von Lindenau to establish a veterinary college in Berlin. The greatest difficulty naturally lay in creating suitable teachers, for at that time none were to be found ready to hand. Count Von Lindenau finally selected three young men, a licentiate in medicine, later Prof. Naumann, a surgeon, afterwards Prof. Sick; and an apothecary, the teacher Ratzburg. The first he sent, along with a farrier, to Charenton, the second, with another farrier, to Vienna, to study veterinary science, and the third to Leipsic to fit himself for teaching chemistry and botany. In January 1789 they returned to Berlin after visiting several other veterinary schools on the way home.

A site was selected, buildings erected, and on the 1st June, 1790, the Berlin Veterinary School was opened.

At first it was intended to instruct army candidates alone, but later scholars nominated by the King and even free scholars were admitted. The course began on the 1st November and lasted three years. All but the free scholars were lodged and fed within the school, in a building known as the kaserne or barracks and were under very strict supervision. At the time of opening there were present in all 46 scholars, viz., 39 military farriers, six King's scholars and one free scholar.

The life of a scholar was as follows:—

Every morning, in summer at 5 a.m. and in winter at 6, the scholars were awakened by the janitor. An hour later a bell was rung and thereupon the practical work began and was continued till 11.30

a.m. From 12 to 1 the pupils dined in the college under the supervision of the two janitors. The time from 1 to 2 p.m. was free, except for those pupils who could not write or cipher. These latter instead received instruction from the clerk. From 2 to 3 p.m. the Professors delivered their lectures. During this time there was no practical work, but it began immediately afterwards and lasted. in summer, until 6 p.m., in winter, until 5 p.m. The pupils had to provide their own supper. At 10 p.m. the janitor saw that they were all at home, and reported the missing ones to whichever Professor had the duty of inspection.

The instruction was divided in this wise :—

Prof. Naumann: Farriery, exterior of the horse, pathology, general therapeutics and pharmacology, special therapeutics of the horse, cattle, sheep and swine.

Prof. Sick: Zootomy and physiology, surgery and surgical operations, economical and veterinary knowledge of domestic animals, contagious disorders and plagues, and the means of combating the same

Apothecary Ratzberg: Economical and medical knowledge of herbs, chemistry and pharmacy, materia medica.

This curriculum was amended in 1804 when Prof. Reckleben was appointed, but apparently against the advice of Prof. Sick, as the latter retired in 1806 after expressing the opinion that the students received "too many lectures and too little practical instruction." This latter significant comment has in the past been applicable to more schools than that at Berlin. It was also found necessary to impose a fee of 60 thalers (£9 stg.) on the free scholars for the three years course—certainly not an extravagant sum. At the same time it was ordered that each outgoing free scholar should receive a certificate showing what degree of proficiency he had attained, and attested by the signatures of the college professors. I may here remark that the same system continues till the present day, the school both teaches, examines, and grants licenses, and that not only for civil life but also for the military and municipal services. The school itself is upheld by the State and the fees are extremely low, as are also the salaries of the professors. I believe the director of the School himself with all his official emoluments does not receive more than £400 stg. per year, while the pay of a repititor or assistant varies from £50 to £75 per year. These repititors and assistants carry on all the practical work of the cliniques. But to return to the school in the year of grace 1806. Despite the Royal patronage, the fact that its report to the judges decided all disputed law suits over horses, and the encouragement it received from Count Von Lindenau, the college from this time seems steadily to have declined. In the year 1809 it was, it is true, not quite closed, but its scholars had diminished to 14 (10 civil, 2 military, and 2 King's scholars) and it became evident to the authorities that the whole establishment must be reorganised.

The first step was really not taken until 1817, in which year it was resolved to establish a State veterinary surgeon with an assured salary of 300 marks (£15 stg.) yearly in each land-department. such a step naturally gave a very considerable stimulus to the entire calling and, added to the efforts which were being made to establish the college on a scientific basis, bade fair to establish a new period of properity.

The troubles were not yet over, however, for the greatest evil still remained, viz., the faulty method of teaching. Firstly, the scholars were not divided according to their progress and length of time in the School but all attended the same lectures. Students who knew nothing of anatomy, who had heard no physiology and pathology, nevertheless attended the practical lectures and cliniques, and on the other hand those who had heard everything else must now listen to the elementary lectures. Then to contribute to the confusion far too little was lectured on. A professor lectured only two hours a week when he could and should have lectured every day.

The great requirements when lecturing to students are :—

(1.) That for the beginner the subjects shall be divided and presented as simply as possible.

(2.) That one should not lose oneself in historical questions.

(3.) That all inflated language should be strictly avoided, the subject taught from its elementary facts and a due sense of the proportionate value of these facts always kept in view. It is also very necessary to repeat the instruction, and afterwards by questioning to make sure that it is understood.

To remedy the existing evils, a fresh syllabus was prepared; but the entire conduct and discipline of the school required reconstructing. The report of the commissioners Koenen and Von Bandemar are exceedingly interesting. not only as showing the state of the School but also the position which the professors held, and as examples of the bluff outspokenness of the German official. There is no diplomacy about language like the following: "The teachers thought they had done everything when they had copied the schools at Charenton and Vienna. They were also so uncertain about the education of the individual veterinary surgeons that they had never asked themselves whether they should send into practice scientifically educated men or only empirics. There was no fixed time at which the pupils should join, and the raw beginner entered the course at whatever point it happened to have arrived."

As to the state of the buildings etc. In the anatomical theatre the roof was in no way weatherproof. the machinery by which carcases were lifted from below into the theatre was totally disabled, the warm bath which had cost 18,000 marks (£900) but which had not been used in all 20 times and not at all for the past 15 years, must be pulled down, as it could not be renovated without a very considerable outlay. The electric machine was so large that although of use to a physicist it was of no value for dealing with animal complaints, and the air pumps and other apparatus were all damaged.

Again in 1818 the minister of public instruction

reported to the Government in a long communication, from which I extract the following: "The inexcusable inefficiency of the Professors, and particularly Professor Naumann, who has been accustomed to lecture only two or three hours a week can no longer be borne." And the minister's instruction of the 20th March, 1822, to the teachers: "The Professors and Repititors are particularly enjoined to lecture at the fixed hours, not to give half hours nor to waste entire quarters of an hour, by which the discipline is relaxed and the students receive no example of diligence."

In 1822 the School came under the management of the Police Præsidium and with it a brighter day seems to have dawned. Glancing back one sees the first of the many brilliant names that were afterwards identified with its fortunes, Gurlt, Hertwig, Spinola, Gerlach and Müller, and latterly those of Schütz, Dieckerhoff, Munck, Fröhner and Müller. Within the past twenty years this school has made really giant strides, and the estimation in which it is held, both by the pnblic and the Government, found fitting expression when in 1887 the reigning monarch conferred on it the title of Hochschule, a designation which places it almost on a level with the University.

(To be continued.)

TRANSLATIONS.

STRANGULATED HERNIA OF THE SMALL INTESTINE,

AS A RESULT OF ITS PASSAGE THROUGH THE EPIPLOON, IN A COW, DEATH.

By Lucet, Médecine Vétérinaire at Courtenay, Loiret. France.

Trans. by Thos. J. Watt Dollar, M.R.C.V.S.

At eight o'clock on the moring of the 28th of last March, I was called to see a heifer (not in calf) in very good condition, which had been suffering with violent colic for twenty-four hours.

I obtained the following history: at seven o'clock on the morning of the previous day, this beast refused to eat and appeared to suffer from abdominal pains; which gradually increased, and violent colic rapidly supervened. The patient lay down and got up again, scraped with its fore feet and stamped with its hind limbs, lay down again and stretched itself entirely on its side, moaned and became violently agitated. Notwithstanding frequent rubbings with dry whisps and with spirits of turpentine both locally and generally, and the administration of infusions of camomile and ether, the animal never appeared calm. During this time there was entire want of appetite, and no fœcal matter was passed.

On my arrival, I found the patient completely extended on the left side, the neck stretched out, the head on the litter, and constantly moving the hind limbs; stimulated to rise, she did so in a very hesitating manner. Whilst up, she arched her back, which remained stiff when pressed, moved about in the same place, striking with the feet, drew her four feet all together, passed a few drops of urine, and tried in vain to defecate. The facial muscles indicated pain, the muzzle was dry, the ears and horns were hot. The flank, both on the right as the left side, was full, and a few rare bulbous sounds could be detected on ausculation. The pulse was small, hard, rapid, the respiration accelerated and the rectal temperature slightly above the normal.

The conjunctival membranes were red. Having ordered a calming and laxative treatment I left my patient under the impression that I was dealing with a case of volvulus. The same night the animal died. I made the autopsy the next day.

The only interesting lesion was in the abdomen. On opening this cavity, a quantity of red liquid escaped and an enormous strangulated hernia presented itself, the small intestine had traversed the epiploon. A loop of the intestine, about one metre and a half (58½ inches) in length, had passed by Winslow's hiatus, which was much enlarged, and the lips of which were distended and infiltrated with fat and much thickened. Strangulated at the point of the epiploic ring, slightly congested for several centimetres above, the herniated intestine and the mesentery were red, even black, considerably thickened, friable, contained food stuffs, a certain quantity of blood and mucosities.

I may add this is the second time in ten years that I have seen a similar case, the first was a heifer of thirteen months.—*Recueil de Médecine Vétérinaire d'Alfort, 15th December*, 1892.

SKIN DISEASE IN ELEPHANTS.

DERMATITIS SUPERFICIALIS GANGRŒNOSA-MULTIPLEX

By Professor Janson, (Tokio.)

Translated by Jno. A. W. Dollar, M.R.C.V.S.

About three years ago the King of Siam made a present of a pair of elephants to the Emperor of Japan. The animals were taken charge of by the Zoological Gardens and up to the middle of last year showed no signs of illness. About that time, however, the smaller (female) elephant began to grow thin, and by the end of the summer ulcers had formed in the skin which continued to grow both in number and area. By the end of March the animal was so much worse that she refused her food and could not rise without assistance, and on this account Prof. Janson was consulted by the Directorate of the gardens. The examination gave the following results: The animal is thin and has a considerable swelling in the flank caused by the presence of masses of food; the hay when offered is taken slowly and only a portion carried to the mouth; mastication is slow and interrupted.

The skin over the greater portion of the body feels like parchment and in many places has been separated from the tissues below by the formation of pus; in single circumscribed spots this process has resulted in the production of abscesses and many such abscesses have through friction become con-

fluent and formed flat irregular ulcers. The ulcers vary from the size of a farthing to that of a five shilling piece; their surfaces are either still covered with a thin coating of pus or appear dry, in the latter case they show uneven granulations.

The margins of both ears for a distance of about 3 to 4 inches from the upper edge are cold and as hard as bone, this change is symmetrical. Beyond this boundary the ears are both inwardly and outwardly soft and warmer than normal. The conjunctiva is markedly reddened and swollen, the inner canthus of the eye and the skin of the cheek below it are covered with a muco-purulent discharge. So far as one can examine them the other organs show no noteworthy change. From these appearances Professor Janson pronounced the subjects to be suffering from a multiple, superficial, gangrenous inflammation of the skin, from symmetrical gangrene of the ears (gangrœna symmetrica aurum) and from a chronic inflammation of the conjunctiva (conjunctivitis chronica). In the case of the larger (male) elephant single small ulcers of the same description could be found in the skin of the posterior portions of the body, a fact which gave rise to the suspicion that the disease was contagious. The microscopical and bacteriological examination of the contents of the abscesses however did not confirm this view.

On this account it was concluded that digestive disturbances were probably the cause, and that these were brought about by bad food, probably by food containing fungi. The elephants had been fed since their arrival entirely on Japanese hay which has only a very low nutritive value, and in addition contains a large quantity of dry mud. Such hay is in Japan very commonly the cause of chronic gastric and intestinal catarrh, and also of broken wind in horses. The elephants had also had no opportunity to bath themselves, a process very necessary for the preservation of their health. The same cause was acting in both cases, but the female elephant was from the first weaker and was therefore the first to be attacked.

The treatment consisted in a complete change of food. In place of the hay the animals received good clean rice straw and Hokkeido hay, accompanied by a certain quantity of rice, barley and bread. It was further ordered that they should be thoroughly washed with luke warm water and soap, and that they should have frequent opportunities to wash themselves (by syringing themselves with the trunk). Inwardly they received arsenic in the form of Fowler's solution. The ulcers in the skin were daily dressed with Burow's lotion.

Eight days after the beginning of this treatment the first traces of improvement showed themselves. The female elephant ate better and was brighter, as was shown by her trumpeting and by the peculiar swinging movements she made on her legs.

No fresh ulcers formed and the old ones healed slowly. Four weeks later both animals were again completely healthy and the ulcers had healed leaving only a few unpigmented areas in the skin.—*Berliner Thierarztliche Wochenschrift, 15th December*, 1892.

VETERINARY SOCIETIES.

NORTH OF ENGLAND VETERINARY MEDICAL ASSOCIATION.

The usual quarterly meeting of this Association was held on Friday, November 18th, in the County Hotel, Newcastle-on-Tyne, the President Mr. G. R. Dudgeon, of Sunderland, in the chair.

The following members were present:—Messrs. F. Finney, G. Mitchell, D. Macgregor, C. Stephenson, G. Elphick, J. W. T. Moore, J. Gofton, D. Dudgeon, J. B. Nisbet, W. Awde, T. Aikin, H. Hunter, and the Secretary. Mr. G. Durrant, A.D.V., was also present.

The minutes of the previous meeting were taken as read and adopted. Letters of regret for not being able to be present were received from Professors McFadyean, Walley, McCall, Williams, and J. E. Peele, Esq., J.P. Durham.

New Members.

Mr. Laurence of Stockton, was unanimously elected a member of the Association, and Messrs. Niell and Davidson of Newcastle; Mr. J. P. Isherwood of Blyth, and Mr. J. W. Ryder of Beamish, were nominated for membership. The President remarking it was a healthy sign to have four fresh gentlemen nominated for membership at one meeting. Mr. G. Durrant, A.V.D., was nominated as Hon. Associate.

Institute of Preventive Medicine.

The Secretary read a letter from the Secretary to the proposed New Institute of Preventive Medicine, asking for a donation, and the question was deferred until the next meeting, which will be the annual.

Election of Officers.

The following gentlemen were elected to serve for the ensuing year:—

President, Mr. W. Hunter, Newcastle; Vice-Presidents Mr. F. Finney, Newcastle, and Mr. Hancock, Forest Hall; Secretary and Treasurer, Mr. Hancock, re-elected; Auditors, Messrs. Elphick and A. Hunter, of Newcastle.

Dinner Committee.

The President and Vice-Presidents. It was also left to the latter to select a suitable place for the annual meeting and dinner.

Is Legislation Necessary with Regard to Tuberculosis, and if so, to What Extent.

By W. Awde.

Mr. President and Gentlemen:—

I am very much surprised to find myself in the position which I now occupy, particularly as it is only about ten days since the Secretary asked me to provide some subject for discussion this evening, and having had some little experience of the difficulties encountered in trying to induce members to come forward with papers or other material for discussion, I felt that I could not well refuse, although I was sorely tempted to do. Having consented, the next difficulty which presented itself was, what the subject should be. In choosing the above title I am afraid that you will consider that it has already been discussed threadbare, but it seems to me that the question is one of such vital importance to the health of the community at large that it is high time something was being done in the matter, and therefore I may be excused for bringing it forward again. Owing to the limited time at my disposal I have not been able to treat

the subject as I should have liked, and am afraid that you will find little or no new material introduced, but that the old has been hashed up for a second time. Before proceeding to deal with the question of legislation it will be necessary that something should be said of the disease itself, and it is only proposed to consider Tuberculosis from two standpoints—1st. Its transmissibility from animal to animal, and 2nd. From animals to man.

Tuberculosis, as is well known to you, is an hereditary disease, and all scientists seem to be agreed that it is caused and transmitted by the comma bacillus which is identical in both man and animals, and that it is practically the same disease in both. The conditions favourable to the development of the disease are—Insufficient air space in buildings where cattle are kept, impure air, bad ventilation, defective drainage, exposure, earth floors to lie on and accummulations of filth about them. I am quite sure that no member of the profession requires to be reminded of the insanitary state in which cattle are kept by the farmers of this North Country of ours. In many of their buildings there is an entire absence of light or fresh air. The byres are very often built in the form of a square and in the middle is a large cesspool or heap of animal and vegetable matter undergoing putrefaction, and which is often the receptacle of all kinds of filth. On moorland farms, where no corn is grown, the animals are often allowed no bedding at all, and are compelled to lie on the ground, which becomes saturated with the solid and liquid excreta. The danger of infection from animal to animal lies in the first place from the hereditary tendency, and it is liable to be transmitted from sire or dam to progeny. Another lies in the respiration by healthy animals of air vitiated by the presence of a diseased one in the same building. The discharges from the body are a source of danger too, but the most fertile source of all is the milk derived from the mammary gland of an animal affected by Tuberculosis. Particularly is this the case in young animals—calves for example—which accounts for the very large mortality experienced in some districts in the rearing of young stock. I am of opinion that contaminated milk is the source of nearly all the cases which arise except from the hereditary tendency. As the disease is on the increase in animals of late years, it will be necessary to offer some explanation of the fact, and I believe that it will be found to arise from crosssng too much with young bulls from short horn herds, the majority of which herds are known to be veritable hot-beds of the disease. All animals for breeding purposes should be free from the disease but particularly the male, as he may sire thirty or more calves in a year, whereas the female only rears one.

Transmissibility from Animals to Man.

The principal danger to man arises from the fact that milk, particularly that derived from the cow, is the staple food of infants and of young people generally. It is well known from experiments carried out with this fluid as it comes from the cow, that it is capable of infecting many animals with the disease. Particularly is this the case with the pig, which animal most closely resemble the human in the arrangement of its stomach and bowels, and it can also be affected by feeding with tubercular matter in a raw state, thus showing the danger there is to the human subject in partaking of milk drawn from from a cow suffering from mammary tuberculosis, as well as the danger arising from imperfectly cooked meat of the same character.

How much of the infantile mortality is to be attributed to this tainted milk of course it is impossible to say, but it is well that the existence of the danger should be pointed out and a remedy provided if possible. There is also another danger to man in the flesh food which he consumes for the building up of his frame; occasionally it happens that in an animal slaughtered, which to look at before being killed would be called by competent judges prime beef, but is found to be the victim of this insiduous disease, and after the cascase is dressed it not uncommonly happens that on the diaphragm, pleura, peritoneum, etc., there are the remains of tubercular deposits, and such being the case there is a danger to human subjects from the consumption of such beef, unless every portion of tubercular material is properly stripped off. At one time my opinion was that if there were any deposits on the carcase it should not be used for human food at all, but confiscated. I have, however, had good reason to considerably modify that opinion, owing to the experiments which have been carried out with muscle juice in a raw state, and which have demonstrated the small amount of risk there is if proper cooking could be ensured, but this cannot always be done. My opinion now is, that provided a carcase is well nourished with a fair amount of fat, and all tubercular material dissected away, that I should pass such a carcase as fit for human food, and consider that there is little danger trom the consumption.

Legislation.

Having considered the sources of the disease and the two ways in which it can be conveyed to man, it will be necessary to consider the questions, 1st.—Is legislation necessary with regard to Tuberculosis? and I think this question can be answered in the affirmative by the whole of the veterinary profession; but when we come to consider the extent of such legislation we shall probably find great differences of opinion.

The object of legislation with regard to tuberculosis must be (1) to prevent the introduction of disease into the human system from animals affected by the diseases *(a) of milk, (b) of flesh.* (2) to protect animals from becoming affected by the disease.

Protection of Man.

What must be done under the first head to protect man from contracting the disease from animals is first of all to ensure a pure milk supply. But how is this to be done? At present the thing is utterly impossible, because the dairies and milkshops' order only provides that Local Authorities shall keep a register of dairies and milkshops and shall make their own provision as to water supply, drainage, paving, light, ventilation etc., and the result is that the number of cubic feet of air which is allowed by the Local Authorities varies from 600 to 800. So far so good, but the most important part of all is omitted and that is to provide for a thorough inspection of the cows that produce the milk, and to ensure that they are in a healthy state. The inspection of dairy cows seems to me to be an urgent necessity, particularly as the disease is most common among those animals kept in town dairies entirely for milking purposes, and this being so the inspection should be conducted by duly qualified veterinary surgeons at stated period—say once a mouth—when any defects as to sanitation &c. could be pointed out at the same time. The inspection of meat must also be introduced in order to protect the public health from this source of danger, and the first step to be achieved in this direction and to make such inspection effective, is the erection in large towns of public slaughter-houses, where it would be possible to see the internal organs after removal from the carcase as well as the carcase itself. A check could then be kept upon the meat coming in from outside, and it would stop or control the hateful traffic which goes on in the majority of our large towns in what is vulgarly known as "slink beef." In too many cases the animals are slaughtered in order to save them from a natural death. Stockton has an unenviable reputation in this class of

trade, but a good deal of it is overlooked or winked at, owing to the difficulty there is in making a proper inspection. A Central Authority ought to have the carrying out of these measures entrusted to it. I would suggest the Board of Agriculture, in order to make them uniform throughout the country. Eight hundred cubic feet of air should be the minimum quanity allowed for each dairy cow. The poor cow has been blamed within the last few years for producing scarlet fever in the human subject, but really this is too hard on the animal, as she is quite innocent, but I well remember a few years ago attending at a farmhouse in order to see a cow suffering from small-pox.

Protection of Animals.

These measures must be of two kinds, and directed either to the limiting of the disease by checks or to stamping it out altogether, which I am afraid would be of too expensive a character to be undertaken by any Government for a single moment, and also on account of the opposition they would encounter because of the widespread character of the disease and also because (as I stated in a former part of this paper) of the large number of valuable shorthorn herds in this country that are affected by it. It should be scheduled and included in the list of diseases under the Contagious Diseases (Animals) Act, and notification of its existence given to the Authorities. Animals found so affected either in the udder or generally should be isolated from other animals and the milk not allowed to be used either for the food of man or for the rearing of calves. They should be slaughtered and compensation given to the owner, but not to more than half its value. Most veterinary surgeons in advocating legislation on this subject insist on the employment of veterinary inspectors to devote the whole of their time to these duties, but my own opinion is that local men could be appointed in their own district, as is done very often in the case of medical officers of health, and the expense incurred in dealing with this source of danger to the public health would be slight, compared with what they would be if special inspectors for the work were appointed. Often the Medical Officers of Health in towns are new in private practice, and their appointment and dismissal is subject to the approval of the Local Government Board. In our case no doubt the control would lie with the Board of Agriculture, and I have no doubt that a sufficient number of veterinary surgeons could be found who would do their duty impartially and fearlessly with a view to the detection and extinction of the disease.

In what way does this disease differ from those already scheduled as contagious diseases and have been dealt with by the legislature? It is hereditary; it is a more insidious disease; has a long period of inoculation difficult to diagnose in some cases or until the disease is sufficiently far advanced. Its consideration and the measures undertaken to limit its spread are of far more importance, so far as the herds of cattle in this country are concerned, than all the other contagious diseases put together, and yet there seems to be a great reluctance on the part of the legislature to deal with it. Why I cannot say, unless it be on the score of expense. The argument usually advanced against legislation is that owing to the difficulty that sometimes arises in diagnosis mistakes would occur. I am sure that argument could be advanced equally in the case of pleuro-pneumonia, but that has not prevented the suppression of the disease. Granted that there is the possibility of a mistake occurring I don't think that it would often happen. A periodic inspection of cattle used for milking and breeding purposes should be made, and where an animal is found to be suffering from local manifestations of the disease the owner should not be allowed to breed from it, but if possible it might be put up to feed. This should not be attempted where the disease was far advanced, but slaughter resorted to instead and compensation given. Urban and rural inspectors should be appointed all over the country, and then general information would be given to the owners of cattle as to the management of their stock, and it might be paid for under the head of technical education.

Extent of Legislation.

We want the power to stop the using of milk from a cow affected by tuberculosis and to order her destruction if need be. We also require power to compensate the butcher for the confiscation of a carcase if he has paid market value for such an animal. Those who trade in such carcases should be severely punished. Power would be required to restrain the owner from selling an animal in a manifestly diseased condition—say in a market or fair. Compulsory provision of public slaughter-houses, and the abolition of private ones in all large towns, inspection of dairies and meat, so as to avoid anything of a suspicious character being partaken of as food. There are other diseases which would call for attention in the inspection of meat, but to touch on them is outside the scope of this paper, and need not be mentioned. It is a question as to whether the public is educated sufficiently up to this point, but every means should be used in order to influence public opinion with regard to it and no opportunity should be lost in bringing the matter before the legislators themselves. I think veterinary surgeons who have been appointed lecturers by the various County Councils to give technical instruction to the farming public could do some good in this direction if they only would. It will be in their province to give information regarding dairy cattle and the breeding and rearing of young calves, and judicious references could be made to the unsanitary condition of stock generally, and the necessity for careful selection being made in the choice of animals for breeding purposes, particularly as to the freedom of the sire from this disease.

And now, gentlemen, having exhausted the subject so far as my time will allow, I must, in conclusion, ask you to be good enough to discuss the subject in a thorough manner, in order to atone for the meagreness of this paper, and I trust that such discussion will bear fruit.

Discussion.

The President, Mr. G. R. Dudgeon, opened the discussion, and in the course of his remarks referred to the annual report of the Board of Agriculture, in which the account of the result of the experiments with tuberculous affected meat and milk is reported.

Thirteen animals were fed on tuberculous meat, ten of which on being killed, were found to be affected with the disease. Nine guinea pigs were fed for a few days on the meat or meat juice of animals affected with the disease, a few died five to six weeks after feeding, the others were apparently healthy until they were killed; also according to Prof. McFadyean's view thorough cooking destroys the infection, but only such thorough cooking as would also destroy its flavour.

Amongst the cattle that had been slaughtered under the recent P. P. Act by the Board, many cases of tubercle were found. It was found that sixteen per cent. of those affected with tuberculosis were cows and heifers in calf, one per cent. bulls, cattle over one year old two per cent., and cattle under one year old one per cent. In Midlothian about 22 per cent. of the cattle slaughtered had been found affected wtth tuberculosis. In London and district fifteen per cent. were found diseased. In some of the herds slaughtered the per centage of cows affected with tuberculosis ran as high as 75 per cent.

Mr. C. Stephenson said he could not agree with Mr. Awde that this disease was hereditary, and this was, he considered, borne out by the statistics quoted by the

President, when he stated that the per centage of animals found affected under one year old was only one per cent. He did not think it right that meat should be used from which the diseased portion had been removed. He was inclined to think that the incubative stage of the disease was short, neither was he certain that the milk supply of affected animals will be stopped, but he did think that when butchers bought animals apparently healthy in open market, and they were found on being killed to be affected with the disease and the carcases condemned, they should receive compensation ; at any rate it was not the butcher that should be the loser.

Mr. ELPHICK said he was of opinion that fully seventy-five per cent. of the cattle that died in Newcastle were the victims of tuberculosis, he also thought it might just be possible that tubercular families mixing up daily is the cause of its apparent hereditary tendency, and he felt we had even yet much to learn with reference to this disease. He agreed with Mr. Awde, the writer of the paper, that private slaughter houses should be abolished altogether and public abattoirs erected, and veterinary surgeons appointed to attend to the duties attaching to such places.

Mr. D. DUDGEON said he had always looked upon this disease as hereditary, not that he pretended to speak from his own experience, but somebody has said that tuberculosis in man and cattle were identical. He has frequently observed that tubercular families go on and on for years, and he could scarcely account for this unless there was something of a hereditary nature in the disease, he therefore could not quite fall in with Mr. Stephenson's view that the disease was not hereditary. The impression always existed in his mind that it was one of the pecularities of the disease that it did not show itself until the animals got older. In his opinion both milk and carcases of infected animals should be destroyed, and would also like to have the disease scheduled.

Mr. C. STEPHENSON wished to state it was not altogether his opinion that he quoted as to the hereditary nature of this disease, but that the most eminent authorities concurred in this view. He also gave an illustration which rather bore out the possibility of hereditary cause arising sometimes, and mentioned the case of a calf which got the disease in this manner, this being the only case he had met with. He also thought they could boast of having something in force in Newcastle, in connection with this disease, that might very well be extended to other places. They having power in Newcastle Market to seize any animal that is suspicious of tubercle, no compensation being given.

Mr. HANCOCK thought the disease was hereditary, although the animals might be years before they showed signs of it, the diagnosis was sometimes difficult, but in the majority of cases he thought it readily to be diagnosed, especially in the lungs.

Mr. AWDE in the course of his reply said to his mind he had proved that the disease is hereditary for he had found calves only three weeks old badly affected. They had been fed on milk. Unfortunately he had not examined the mothers. He also instanced a case of a calf third generation of an affected bull being diseased.

Mr. H. HUNTER proposed a vote of thanks to Mr. Awde for coming to give them such an interesting paper.

Mr. ELPHICK seconded, and it was carried.

The members then adjourned for tea.

W. ASHTON HANOCCK, Sec.

Three cases of rabies took place in the North Riding of York last week, in one case a cattle beast being affected.

ARMY VETERINARY DEPARTMENT.

Vet.-Lieutenant F. D. Hunt embarked for a tour of service in India on November 26th.

Vet.-Major W. Walker has been granted a further extension of six months leave.

Vet.-Capt. E. H. Kelly embarked for India on December 16th. on the expiration of his ten months leave of absence.

Vet.-Lieutenant E. W. Larnder has been granted a further extension of sick leave to January 31st 1893.

EXTRACTS AND NOTES.

WIND-SUCKING BIT.

By JAMES MILLS, A.V.D.
Principal, Bombay Veterinary College.

This bit has been made with a view of preventing wind-sucking, and can be worn while the horse is at rest in the stable, or in the form of a bit while at work.

Even if a horse can, which is doubtful, indulge in the habit of wind-sucking while the bit is in his mouth, the air he sucks instead of finding its way to the stomach, passes out at each side.

I have tried it for some months on several confirmed wind-suckers, and without exception all have improved in condition while they had it on. It can be procured from Messrs. Arnold and Sons, London.

THE SIMPLEX VETERINARY THERMO-CAUTERY.

The thermo-cautery has, in the hands of many practitioners, displaced the old firing iron with considerable advantage to the patient and some credit to the operator. Probably the scientific looking instrument would be more widely used if simpler and less expensive.

Getting the ' thermo ' hot on a cold windy day is by no means always an easy task. The "simplex," gets over this trouble most effectually, being self-heating. For those who adopt pyro-puncture the points supplied with this instrument are very satisfactory, but the arrangements for line firing are not so good. Any shaped points can, however, be made to order. There is a joint, by which the points are attached to the handle, that enables the operator to incline the points to any angle he prefers.

It certainly is rapid in action and easy to work. The old Paquelin arrangement, which included a

bottle of benzoline, was often found complicated. The operator was supposed to hang the bottle from his button hole, but this seldom worked, and so he did his work with the bottle in one hand and the 'Thermo' in the other. The 'Simplex' does away with the bottle by carrying its charge of benzoline in the hollow handle. None can be spilled because it is absorbed on sponge packed inside for the purpose. Air driven through the handle supplies the material for combustion.

Mr. Huish is sole agent for the instrument.

DENTITION—A DISPUTE AS TO AGE.

An action involving a point of great interest to veterinary surgeons was heard at the monthly sitting of the Stamford (Lincolnshire) County Court, on Wednesday, the 14th ult., before his Honour Judge Hooper and a jury.

The plaintiff, Thomas Wolley, a licensed victualler and farmer, of Ryhall, a village two miles and a half from Stamford, sued James Taylor, a miller and farmer, of Wilsthorpe mills, near Braceborough, in South Lincolnshire, for the sum of £10 10s. The plaintiff's contention was that the defendant had converted to his own use or had wrongfully deprived the plaintiff of his bullock

Mr. James E. Atter (the town clerk of Stamford) appeared for the plaintiff; and Mr. Alderman Valentine Stapleton was instructed to defend.

Mr. Atter, in his opening remarks, said that the question for the jury to determine was as to whom the bullock in dispute really belonged. The issue before the jury was as to identification.

The plaintiff was called and said that in March, 1892, he had in his possession three calves. One of these was a roan and one was a red steer with a black nose, the third calf, the animal in dispute, was a red steer with a white patch on the ribs and a little white hair in its tail. It was calved on the 18th of March of last year. All the three animals were sent to his brother's at Braceborough in the month of May this year, and they were put on to the cow common in that village. On the 29th October this year the plaintiff went with his brother and a farm lad to fetch the three beasts home. When he got to Braceborough he discovered that one of the beasts was missing. In the afternoon of the same day he found the missing beast on the defendant's premises. On the 31st of October he removed the beast in question from the defendant's place and took it to Ryhall, where it remained until the 10th of November, and then the defendant fetched it back again. He (the plaintiff) never doubted the fact that it was his animal.

Five other witnesses having been called, each of whom definitely identified the animal as the property of the plaintiff, Mr. Frederick Wattam, M.R.C.V.S., of Stamford, was called by Mr. Atter. Mr. Wattam said that he was on the plaintiff's premises at Ryhall on the first of March last year, directly after the birth of the three calves referred to. He saw the plaintiff's beasts at Braceborough on the 3rd of November last. On Monday, the 12th inst., he examined the animal in dispute at Wilsthorpe, and from the state of the teeth and from other signs he was certain that the beast was between twenty-one and twenty-four months old. In the course of cross-examination by Mr. Stapleton, Mr. Wattam said that he carefully noticed the incisor teeth of the animal; but added that he did not examine the molars as that would have been unnecessary.

Mr. Stapleton, in addressing the jury for the defence, commented upon the fact that Mr. Wattam did not examine the molar teeth of the animal, and said that this was very strange. He proceeded to call the defendant, who said he was a miller at Wilsthorpe and occupied some land. He himself bred the steer in question, the animal being now in his possession. He did not know the exact date on which the cow calved, but the time was up on the 22nd of September, last year. A large number of witnesses, called for defence, stated that the animal was the property of the defendant.

Mr. J. A. Robinson, M.R.C.V.S., of Market Deeping, South Lincolnshire, said that on the 8th of November last, at the request of defendant, he examined the steer in question in a field at Braceborough. He carefully examined the teeth, the molars as well as the incisors, and came to the conclusion that the animal was at that time 16 months old.

Mr. John Thomas Holmes, M.R.C.V.S., of Bourn, in South Lincolnshire, said that he examined the beast in question on Monday, the 12th inst. He was convinced that the beast was not now, more than 16 months old. He was firmly of the opinion that it was impossible to arrive at a right conclusion without examining the molar teeth as well as the incisors. He himself examined the molars as well as the incisors.

Mr. Holmes, senr., M.R.C.V.S., of Bourn, the father of the last witness, said that he had been in practice for more than half-a-century. He examined the beast on Monday, the 12th inst., at the same time as his son. Witness examined the molars as well as the incisors, and he concluded that the animal was about 16 months old.

The jury, after a long deliberation, announced that it was impossible for them to agree as to a verdict, and they were consequently discharged.

Premiums for Thoroughbreds.

A change of very considerable importance in the amounts and distribution of the Queen's premiums for thoroughbred sires has been decided upon by the Royal Commission on Horse Breeding. What has been resolved upon is that in place of the 22 premiums of £200 which it used to offer there shall be 30 premiums of £150. Formerly the cost to the Commission was £4400; now it will be £4500. Counting in the Royal Agricultural Society's three premiums there was a total of 25 premiums formerly, whereas there will now be five more. For the purposes of the Commission in awarding premiums the country is divided into the following "District Classes":—A.—Beds, Bucks, Cambs, Essex, Hertford, Hunts, Middlesex, Norfolk, Oxon, Suffolk. B.—Cumberland, Durham, Northumberland, Westmoreland. C.—Derby, Leicester, Lincoln, Northants, Notts, Rutland,. D.—Berks, Cornwall, Devon, Dorset, Hants, Kent, Somerset, Surrey, Sussex, Wilts. E.—Yorkshire. F.—Gloucester, Hereford, Monmouth, Salop, Stafford, Warwick, Worcester, South Wales. G.—Cheshire, Lancashire, North Wales. H.—Stirlingshire and district. I.—Fifeshire and district. J.—Ayrshire and district. K.—Moray, Nairn, and Banff. L.—The Lothians. M.—Roxburgh, Berwick and district.

During the past week twelve steamers landed cattle and fresh meat at Liverpool from American ports, bringing a total supply of 3861 cattle and 12,840 quarters of beef. These figures show an increase over previous week of 988 cattle, but a decrease of 9708 quarters of beef.

BENJAMIN CARTLEDGE.

The late Mr. Cartledge will certainly be best remembered for his more purely personal gifts. He has not left any very prominent contributions to veterinary science or literature, yet he was well up to date in his scientific knowledge and a writer of no mean merit. The volumes of *The Veterinarian* from 1852 to 1864 contain occasional contributions from his pen, all of which show power of observation and a preference for clinical records.

At the Council meetings Mr. Cartledge seldom spoke, but when he did his remarks displayed shrewdness and common-sense. On the finance committee he gained a great reputation for mastery of that department, a fact which probably led to his selection as one of the Trustees of the College.

As an examiner he was equally liked by teachers and students. His questions were practical and plainly stated. He never made the mistake of trying to trip up a candidate—he endeavoured to ascertain what a man knew and not what he did not know. The mental characteristics which made him a good examiner would have made him a good teacher, and although he was never attached to a teaching institution he undoubtedly impressed many living practitioners with his ideas and methods. He was one of the few large practitioners that parents and guardians delighted to entrust with their young men before sending them to College. All his pupils spoke well of him, and those with intelligence bore the mark of his training.

Mr. Cartledge wrote little, and seldom attended the veterinary associations, yet he was widely known and highly respected. Part of his popularity no doubt was due to his long connection with the Council and the board of Examiners, but a larger part was due to his own strong personality which impressed everyone even on the shortest acquaintanceship. He was a gentleman, and a good practitioner; a genial man, a perfect tactitian, and a member who had always at heart the interests of his profession. He did his duty quietly, and made many friends but no enemies.

The Prevalance of Anthrax.

A new Order dealing with anthrax appears in Friday night's *London Gazette*. It comes into force on 1st January next. In the Order it is provided that horses asses, and mules (as well as the animals specified in the Act of 1878) shall be animals, and anthrax (that is to say, the disease called or known as anthrax, splenic fever, or splenic apoplexy of animals) shall be a disease for the purposes of certain specified sections of the Act of 1878 and the Act of 1886. The provision for notifying the occurrence of the disease is in the following terms:—Every person having or having had in his possession, or under his charge, any diseased or suspected animal shall, with all practicable speed, give notice of the fact of the animal being or having been so diseased or suspected to a constable of the police district wherein the animal so diseased or suspected is or was; the constable receiving such notice shall forthwith give information of the receipt by him of the notice to an inspector of the local authority, who shall forthwith report the same to the local authority. The inspector of the local authority shall forthwith give information of the receipt by him of the notice to the medical officer of health of the sanitary district in which the diseased or suspected animal is or was.' Another clause makes it the duty of any inspector to act immediately, and there are also provisions for giving public warning as to the existence of anthrax, cleansing and disinfection, slaughter of diseased animals, and the payment of compensation, etc.

CORRESPONDENCE.

LACTATION IN A BITCH.

DEAR SIR,

The following is a case of "Lactation in a non-pregnant bitch."

About six months ago I was called to see a setter bitch. The mammæ were full of milk, but there was also a copious, fœtid discharge from the vagina. I at once thought the bitch had pups inside her which were undergoing decomposition, but on enquiry the owner told me she had never been served nor even in œstrum; he was very positive on this point because he had wanted to have the bitch lined the first opportunity, consequently he had been watching her very closely. I may also add that the bitch showed no signs of being in pup before the appearance of the discharge, and while unwell no trace of any pups was seen, neither could any be felt with the fingers or forceps.

I had heard of bitches having milk in their mammary glands nine weeks after œstrum, but, under the circumstances, could not understand the discharge. The only conclusion I could come to was that the bitch must have somehow been served; the milk appeared in the mammæ in the ordinary way and the discharge was due to the decomposition of the pups, the sheletons of which would be probably still in the womb.

I may say that the discharge from the vagina lasted about three weeks, the milk disappearing in about twelve days.

MICHAEL THOS. SADLER, M.R.C.V.S.

THE FELLOWSHIP.

SIR,

As Mr. E. W. Hoare's letter is so contradictory, and as he has so misconstrued my own of December 3rd I fail to see what good I can do the object I have in view, by answering him in detail.

I have however to thank him for shewing so clearly that to pass the Fellowship examination a candidate is only required "to show that he had read and kept up his work carefully and well."

The object of my first letter, by asking the question, 'in what way does the Fellowship fulfil the requirements of a higher degree?' was to give the Fellows an opportunity to state their side of the question, and show on what grounds they took their stand and position as holders of a higher degree.

If the Fellowship question is to become a prominent one in the coming elections of 1893 there should be some formal propositions put forward for consideration.

In my own opinion it should be essentially a specialist degree. It is only from specialists in each branch of the profession that we can look with any certainty for the rapid advancement of our science, so urgently desired.

This, I take it, was the object of founding the Fellowship degree.—Yours truly,

FRANK W. GARNETT.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. M. T. Sadler, J. Donald, W. Stothert, C. C. Hoadley, F. W. Garnett, "The American Veterinary Review."